

influence on the tissue or cells." The Examiner further notes that "it is unclear how measuring electrical and visible properties of the tissue or cells meets the limitations recited in the preamble of testing medicines. The claim requires measuring electrical or visible properties, yet that appears to require judging both properties. Is one and/or both properties necessary?"

Applicants have amended the claims to remove the qualitative terminology "judging" from the claim. Applicants have noted in the application how comparison of the visual and electrical parameters of the tissue sample allows determination of advocacy of the chemical substance as medicine.

Withdrawal of the rejection is therefore requested.

Rejections Under 35 U.S.C. 102(b)

Claims 12-13 are rejected under 35 U.S.C. 102 (b) as anticipated by Giaever et al. (U.S. Pat. No. 5,187,096).

In support of the rejection, the Examiner notes:

"Giaever et al. describes a method which comprises a detector for detecting electrical properties of endothelial cells when chemical substance thrombin is exposed to the cultures in Figure 9 which is observed (i.e. visible property). He further describes a testing device that comprises electrical measurement portion (i.e. visible detection portions) (Figure 3, data acquisition, Figure 4, Figure 5, Figure 6 etc.). The prior art anticipates the claimed invention."

Applicants disagree. The claimed device and procedure both require the use of a detector comprising a microelectrode array on a substrate, where the microelectrodes also operable as exciters, and the microelectrodes are suitable for use with a tissue sample. The Giaever et al. device is of a type that is not suitable for use with a tissue sample but instead is applicable only for a soup of cells. The quality of information relating to the electrical signal thus received is not in the same league as is derivable from the claimed device and procedure.

Let it be understood that no two electrodes of Giaver et al. are able to access a single slice of tissue.

Withdrawal of rejection is therefore requested.

Claims 12-13 are rejected under 35 U.S.C. 102 (b) as being anticipated by Nisch et al. (Biosense.Bioelect 1994, 9:737-741).

In support of a rejection the Examiner notes that:

"Nisch et al. describes a method which comprises a detector for detecting electrical properties of neuronal activity in vitro. He measures a detectable electrical signal before and after stimulation in Figure 7 which is observable (i.e. visible property). He further describes a testing device comprises electrical measurement portion (i.e. visible) visible detection portion (Figure 3 - monitor, Figure 4, Figure 5, Figure 6 etc.). The prior art anticipates claimed invention."

Applicants disagree. Nisch et al. does not suggest the use of or suitability for placement of a tissue sample on a microelectrode array. Furthermore, no suggestion is found for introduction of a chemical substance which may have use as a medicine onto the tissue sample. It is noted that the only stimulation arguably provided is via an electrical function generator introducing a waveform through a micropipette (see page 739).

Withdrawal of rejection is therefore requested.

Claims 12-13 are rejected under 35 U.S.C. 102 (b) as being anticipated by Suzuki et al. (U.S. Pat. No. 4,288,544). In support of the rejection, the Examiner notes:

"Suzuki et al. describes a method which comprises a detector for detecting electrical properties of different microorganisms when cultured with different media in Table 1, 2, 3, 4, 5 which is observed (i.e. visible property). He further describes a testing device that comprises electrical measurement portion (i.e. visible) visible detection portions (Figures 1 and 2, Potentiometer and Recorder). The prior art anticipates the claimed invention."

Applicants disagree. Suzuki et al. fails to show a multiple microelectrode device which is capable of contact with a tissue sample. The Suzuki et al. device is, again, suitable only for use with cellular compositions.

Consequently, it is quite appropriate that the rejection be withdrawn. Such withdrawal is requested.

Restriction Requirement

Applicants note that the restriction requirement is made final. A comment that a "special technical features" links the three inventions is also noted. Consequently, it is believed appropriate that applicants retain all the claims in the application and when allowance is provided, that the common technical feature as it then is found, be inserted in each of the withdrawn claims. It is noted that no suggestion has been made that the various process claims which were not elected and the various device claims which were not elected differ in any manner with those which were elected other than in scope.

Again, withdrawal of the restriction requirement is requested in that prior determination of unpatentability of a concept, rather than a claim, is singly inappropriate place to determine independence of the claims.

SUMMARY

Applicants have responded to each matter of substance raised in the Office Action. It is believed that the claims as discussed are patentable in view of the cited prior art. Applicants request such allowance. Should the Examiner have any questions, comments, or suggestions, he is urged and invited to contact applicants' attorney at the number listed below. Should an interview be considered desirable, please feel free to also contact applicants' attorney for a personal or telephone interview.

Respectfully submitted,

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